

WHAT IS CLAIMED IS:

1. A triacetyl cellulose film comprising (a) a triphenyl
monophosphate compound and (b) an aromatic polyol-bridged polyphosphate
5 compound.

2. The film of claim 1 wherein compound (b) is sufficient to reduce
the rate of water vapor transmission of the film compared to the same film without
10 compound (b).

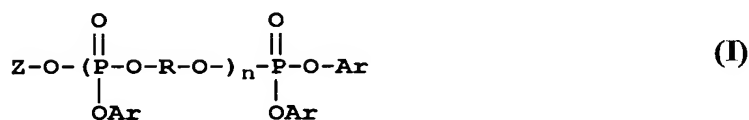
3. The film of claim 2 wherein compound (b) is a bis-(diphenyl
phosphate) compound.

4. The film of claim 3 wherein compound (b) is an aromatic diol-
15 bridged bis-(diphenyl phosphate) compound.

5. The film of claim 3 wherein the polyol of compound (b) is a
resorcinol bridged bis-(diphenyl phosphate) compound.

6. The film of claim 3 wherein the polyol of compound (b) is a bis-
20 phenol A compound.

7. The film of claim 1 wherein compound (b) is represented by
formula (I):



wherein each Ar is an independently selected aromatic group, each R is a substituent containing an independently selected aliphatic, cycloaliphatic or aromatic group, Z is HO-R- or Ar-, and n is 1 to 10.

5 8. The film of claim 1 wherein R is a bis-phenol A group.

9. The film of claim 1 wherein R is a resorcinol group.

10 10. The film of claim 1 wherein the total amount of compounds (a) in
the film is 6-15% by wt. of the film.

11. The film of claim 1 wherein the total amount of compounds (a) in
the film is 10-12 % by wt. of the film.

15 12. The film of claim 1 wherein the total amount of compounds (b) in
the film is 1-5 % by wt. of the film.

13. The film of claim 1 wherein the total amount of compounds (b) in
the film is 1-4 % by wt. of the film.

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14. The film of claim 1 wherein the film comprises more than one
compound (b).

25 15. The film of claim 7 wherein the film comprises more than one
compound of Formula (I).

30 16. The film of claim 15 wherein at least two of the compounds of
Formula (I) differ by the value of "n" in formula (I). *1 2*

17. The film of claim 16 wherein the values for n for two of the
compounds includes values of 1 and 2.

1 2

18. The film of claim 16 wherein the values for n for the more than one compounds is predominantly 1 and 2, based on a wt% calculation of all the compounds of Formula (I).

5 19. The film of claim 1 wherein the triacetyl cellulose film exhibits a birefringence such that the retardation of a 80 micron thick film is less than 5 nm.

20. The film of claim 1 wherein the degree of acetylation of the triacetyl cellulose is 2.4 to 3 sites per cellulose unit.

10 21. The film of claim 1 wherein the degree of acetylation of the triacetyl cellulose is 2.7 to 2.9 sites per cellulose unit.

22. The film of claim 1 wherein the weight average molecular weight
15 of the triacetyl cellulose is 150,000-250,000.

23. The film of claim 22 wherein the weight average molecular weight of the triacetyl cellulose is 180,000-220,000.

20 24. A method of imparting improved water vapor transmission resistance to a triacetyl cellulose film comprising adding the components of claim 1 to a cellulosic dope prior to casting.

25 25. A polarizer element comprising a laminate of the film of claim 1.

26. A liquid crystal imaging element comprising the polarizer element of claim 25.

27. An optical device containing the liquid crystal element of claim 26.

30 28. A triacetyl cellulose film comprising (a) an unsubstituted triphenyl phosphate compound and (b) an aromatic diol-bridged polyphosphate compound.

29. A triacetyl cellulose film comprising a combination plasticizer containing (a) at least 6 wt% of the film of an unsubstituted triphenyl phosphate compound and (b) at least 1 wt% of the film of an aromatic diol-bridged polyphosphate compound.
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